

## SOME WESTERN ANTHOPHORIDAE (HYMEN.).

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***Anthophora chlorops* n. sp.**

Female: Like *A. pacifica* Cress. (*A. ignava* Cress.) but tegulae testaceous; apex and posterior side of fore and middle tibiae pale haired, the rest of middle tibiae with pubescence pale in some lights; abdomen not bluish; sternites with more pale hairs; eyes distinctly green (apparently black in *A. pacifica*); hairs of last tergite and apex of fifth dark reddish, quite ferruginous close to sides of pygidial area (these all black in *pacifica*); hair on under sides of fore and middle femora pale, somewhat mixed with dark on middle femora (pubescence of under side of middle femora black, of fore femora mixed with black, in *pacifica*); apex of hind femora with white hairs just above knee plate (black in *pacifica*); head larger and facial line a little longer in comparison to transfacial than in *pacifica*; hind tibial spurs large and stout, as long as hind metatarsus, when the latter is measured to base of second tarsal joint.

North Yakima, Washington, May 23, 1903 (Eldred Jenne).

For comparisons with other related species see a key to the species of this group which will be published elsewhere. The type is in Prof. T. D. A. Cockerell's collection.

***Anthophora gohrmanae* Cockerell**

Two females and a male from Denver, Colorado, May 2, 1902, are evidently typical *A. gohrmanae*, the male being almost exactly like the type.

Four females from Denver (above data), a male from Montrose, Colorado, May 5, 1901, and a male from Grand Junction, Colorado, May 8, 1901, represent a distinct form, as follows:

***Anthophora gohrmanae coloradensis* n. var.**

Male (type): Similar to typical *A. gohrmanae* Ckll. but lower sides of face with some black hairs (only two or three in *gohrmanae*); lateral face marks more deeply notched above; cheeks with more black hairs near eye margin; scutum with some black hairs medianly; fore tibiae with some black hairs; spine of hind metatarsus usually smaller; third tergite practically without light hair; fourth and fifth tergites with less pale than in *gohrmanae*; mandible with a larger yellow spot than in the type of *gohrmanae*.

Female: A few black hairs on sides of face, but variable and intergrading with typical *A. gohrmanae*.

Montrose is the type locality. The type is in Prof. Cockerell's collection.

In both *A. gohrmanae* and *A. g. coloradensis* (males) there is considerable black hair at sides of vertex, overlooked by Cockerell.

I suspect that *A. g. coloradensis* is a sort of northern subspecies of *A. gohrmanae*, differing from typical *gohrmanae* by average characters rather than by differences found in every individual.

#### *Anthophora nigrifulva* Cockerell

Male: Length  $7\frac{1}{2}$  mm.; similar to female but more slender; scape yellow beneath except at apex; flagellum less reddish beneath; number of tergites with black bases varies from two to four; apex of abdomen bilobed, the lobes rounded and reddish; seventh segment with dark lateral teeth; hair on under sides of tarsi ferruginous; face narrow; no black hairs on head or thorax.

Tokopah Valley, Sequoia National Park, California, August 20 to 26, 1933, one on a small *Eriogonum*, the others on *Aster adscendens*; Mineral King, Tulare County, California, September 3, 1933, on *Aster*; Erwin Lake, San Bernardino County, California, August 22, 1932 (all Michener, Coll.). One female from the latter locality has more black hair than usual. The male runs to 14 in Cockerell's Key to *Micranthophora* (1906).

#### *Anthophora erythrothorax* n. sp.

Female: Length 9 to 10 mm.; black, the mandibles except for the apical part, most of the labrum, and a broad band on the lower part of the clypeus extending upward to a slight point in the middle yellow; antennae all black, the first joint of the flagellum nearly as long as the next three; mandibles bidentate; eyes strongly convergent below, the distance between their lower parts equals about three fifths the length of an eye; scutum dull, very finely and rather indistinctly but closely punctate; scutellum similar, with a raised, shiny, sparsely punctate, basal median area; hair of head and thorax, particularly the latter, bright fulvous, sparser on the head, intermixed with black on the vertex, and replaced by black on the sparsely haired disks of the scutum and scutellum; tegulae ferruginous; wings nearly clear, the veins black, first recurrent joining second submarginal cell at the beginning of the last third; legs

black, the small joints of the tarsi reddish, the hairs fulvous, brighter and lighter on the under side of tarsi, distal comb of hind basitarsus black; hind knee plate large, wide and rounded below, narrowed above, longer than wide; abdomen black with broad fulvous hair bands, undulate on their posterior edges after the manner of those of *A. curta* Prov.; fifth segment with dark fuscous hair, the median posterior spot black; first tergite entirely covered with appressed pubescence (in *A. curta* it has only an apical band); venter of abdomen slightly rufescent, with apical segmental fringes of pale ferruginous hair.

Mill Creek, San Bernardino Mountains, California (type locality), August 31, 1930 (Michener). A paler specimen is from Tokopah Valley, Sequoia National Park, California, August 23, 1933 (Michener).

This species runs out at 4 of group D in Cockerell's key (1906). This and the next are the reddest *Micranthophora* which I have seen. The knee plate of *A. curta* (female) is much broader than long and rather small.

#### ***Anthophora rhodothorax* n. sp.**

Female: In general appearance like *A. erythrothorax* Mich. but quite different, really closer to *A. curta*. There is a transverse yellow supraclypeal mark; clypeal band not extending upwards in the middle; posterior knee plate as in *A. curta*; tegulae black; first recurrent vein joining second submarginal cell in the middle; hair on under side of tarsi ferruginous; abdomen marked as in *curta* except for the bright fulvous color; abdominal bands unbroken; first joint of flagellum shorter than in either *A. curta* or *erythrothorax*.

This runs to *A. curta* Prov. in Cockerell's key (1906). It differs in the bright coloration, presence of a supraclypeal mark, etc. If the male were unknown it would be placed close to *curta*. I think there can be little doubt about the correct association of the sexes, although the male is very different from male *curta*.

Male (type): Length nearly 9 mm.; similar to the female; face very narrow, narrowest just below the bases of the antennae; width of clypeus only  $\frac{1}{2}$  the length of an eye. In addition to the yellow of the female, the under side of the scape, except at the extreme tip, is yellow. Vertex without black hairs, and disks of scutum and scutellum with only a very little, nearly all of the hair being bright fulvous, even brighter than

in the female and in *A. erythrothorax*; abdomen much as in the female, but first tergite covered with appressed pubescence except for a small median area, bands of segments five and six widened by the ferruginous or fulvous color of the integument beneath and beyond them; last segment deeply bilobed, the lobes reddish; sides of this segment with rather slender dark teeth.

Idyllwild, San Jacinto Mountains (Riverside County), California, August 12, 1934, on *Aster* sp.? (Michener).

***Emphoropsis salviae* n. sp.**

Male: Length 13 mm.; black, the clypeus (except two small spots), a line above clypeus, and lateral face marks white; pubescence black, mixed with fulvous on face, replaced by fulvous on vertex, dorsum of thorax (back to the postscutellum, and not extending down on sides below level of tubercle), and first tergite, the scutum with some black hairs intermixed; pygidial area dull, considerably narrower than in *E. birkmanni* Ckll.

La Crescenta, California, on *Salvia mellifera*, April 20, 1935 (Michener).

In Cockerell's key (1905) this runs to the quite different *E. interspersa* Ckll. It is perhaps closest to *E. birkmanni* Ckll., which has brighter red hair, not mixed with black on dorsum of thorax, etc. It is possible, but improbable, that this is the male of *E. pascoensis* (Ckll.).